Occupational Health, Productivity and Evidence-Based Workplace Health Intervention

Individual performance, as one of the productivity components, is determined mainly by appropriate knowledge and skills, high work motivation, and good health status. At the enterprise level, productivity levels depend on many factors, including market forces, company policies, seasons, or societal situations such as the pandemic we are currently facing. Health is only one factor, interacting with other factors and influencing performance and ultimately, productivity. A person in a healthy state who has physical and emotional abilities, accompanied by a desire to work, will show high performance. Individual performance measures are generally based on time measures, namely absenteeism, which is not coming to work due to health problems, and presentism, namely unproductive time at work due to health problems. High worker performance will lead to higher productivity because it can produce better goods and services, more creativity and innovation, high intellectual capacity, and reliable resilience. High productivity can lead to higher profits. Many health conditions and health risks affect the decline in performance. The Healthy Workplace framework showed a high association between health conditions and health risks with absenteeism and presentism.[1] Health risks associated with absenteeism include lack of physical activity, high stress, and diabetes. Diabetes is the highest risk factor for absenteeism, which increases the chance of absenteeism by 2.3 times (OR=2.29, 95% CI 1.17, 4.47). Stress most increased presentism odds (OR=2.09; 95% CI 1.65, 2.63), followed by unmet emotional needs (OR=1.93, 95% CI 1.52, 2.44). Other health risks were associated with presentism, including poor nutrition, body mass index and low physical activity.[2] Chronic diseases such as hepatic disorders are a risk factor for young mining workers.[3]

WHO's Global Health Estimates provide the data that seven of the top ten causes of death globally are non-communicable diseases. Ischaemic heart disease, stroke, and chronic obstructive pulmonary disease are the leading causes of death in high-income and lower-middle-income countries.[4] The other study found that smoking, occupational risk, and air pollutants were high rank of COPD risk factors. These diseases generally occur in the working-age group, indicated by the prevalence of smoking, which is 31%, the prevalence of hypertension at the age of >18 years, which is 31.3% in men and 36.9% in women.[5]

The main nutritional problems in the working-age group based on the Indonesian Basic Health Survey 2018 were obesity (prevalence 21.8% at age >18 years), anemia (48.9% in pregnant women), and chronic energy deficiency (32%). The other health problems in this working age group were mental-emotional disorders (9.8%) with an increase compared to 6% in the Basic Health Survey 2013.[5] The prevalence of anemia and chronic energy deficiency is still high in women of childbearing age who are also included in the productive age group.[6,7] With a high participation rate of female workers and a high prevalence of chronic energy deficiency and anemia, nutritional problems are immense.

In low-income countries, Infectious diseases, especially tuberculosis (TB) and HIV/AIDS, are also a health problem in the working-age population.[4] Tuberculosis has a considerable impact on families. Studies in Indonesia show that although treatment is guaranteed through the National Health Insurance, households affected by TB still face the risk of poverty. Impoverishment occurs due to additional expenses outside of treatment for treatment, including reduced income due to not coming to work.[8]

The effect of health problem on worker productivity is getting bigger, along with the increasing risk of work accidents. The cost of per work accidents case in Europe is high; highest for The Netherlands (€ 73,410) and the lowest for Poland (€ 37,860). The total costs ranged from 2.9% of gross domestic product (GDP) for Finland to 10.2% for Poland. The cost calculation considered three categories: direct healthcare, indirect productivity, and intangible health-related quality of life costs.[9] The most significant work accidents came from the construction and manufacturing sectors (32%), followed by the transportation sector (9%), forestry (4%), and mining (2%). Unfortunately, there is no exact data on the magnitude of occupational diseases. Indirect costs related to lost workdays, costs for absenteeism payments, and worker presentism were considerable. In addition, the burden of personal expenses incurred by workers for transportation costs and other costs to obtain health services decreases productivity. Medical, social and economic consequences of non-communicable diseases, occupational accidents and diseases, and nutritional problems lead to public health problems in the working population.

The workplace-based intervention to overcome the workers' health problem by integrating occupational health services is a method of choice.[10] Since 2007, the World Health Organization (WHO) has launched Workers' Health: A Global Plan of Action. The action plan responds to the importance of workers' health as a prerequisite for productivity and economic development through increasing access to health services for workers and building a healthy workplace.[11] Furthermore, WHO introduced the Healthy Workplace Framework as practical guidance. A healthy workplace is a place where workers and managers work together continuously to make improvements to protect and promote the health, safety, and welfare of workers and workplace sustainability. There are four interrelated factors: a) health and safety in the physical environment, b) health, safety, and wellbeing in the psychosocial environment, including workplace organization and work culture, c) health resources in the workplace; and d) workplace community participation to improve the health of workers, their families, and the surroundings.[1] The implementation of the healthy workplace program needs supporting evidence on workplace-based intervention through relevant research. This is what this special issue on Occupational Health of the Acta Medica Philippina is facilitating.

Prof. Muchtaruddin Mansyur, MD, PhD
Department of Community Medicine
Faculty of Medicine
Universitas Indonesia

REFERENCES

1. Burton J. WHO Healthy Workplace Framework and Model: Background and Supporting Literature and Practices. Geneva: World Health Organisation; 2010. p. 123. Available from: https://www.who.int/occupational_health/WHO_health_assembly_en_web.pdf
2. Boles M, Pelletier B, Lynch W. The relationship between health risks and work productivity. J Occup Environ Med. [Internet]. [cited 2021 Aug 24]. Available from: doi: 10.1097/01.jom.0000131830.45744.97 PMID: 15247814.
3. Mansyur M, Jen Fuk L. Mining workers, administrative task, obesity, hypertriglyceridemia, and young workers increased risk liver function elevation among Indonesian male workers April 201875(Suppl 2):A244.2-A244 DOI: 10.1136/oemed-2018-ICOHabstracts.697. BMJ Occup Environ Med [Internet]. [cited 2021 Aug 24]. 2018;75(Suppl 2):224. Available from: https://oem.bmj.com/content/75/Suppl_2/A244.2
4. World Health Organisation. Top Ten Cause of Death 15 August 2007 [Internet]. [cited 2021 Aug 24], Geneva: World Health Organisation. Available from: https://www.who.int/news-room/fact-sheets/detail/the-top-10-causes-of-death
5. Badan Penelitian dan Pengembangan Kesehatan Kementerian Kesehatan. Hasil Utama Riskesdas 2018 [Internet]. [cited 2021 Aug 24]. Kementerian Kesehatan RI; 2019. 220 p. Available from: https://kesmas.kemkes.go.id/assets/upload/dir_519d41d8cd98f00/files/Hasil-riskesdas-2018_1274.pdf
6. Reskia RN, Hadju V, Indriasari R, Muis M. Anemia, chronic energy deficiency and their relationship in preconception women. Enfermería Clínica. 2020; 30 (Suppl. 6):76-80
7. Msemo OA, Bygbjerg IC, Møller SL, Nielsen BB, Ødum L, Perslev K, et al. (2018) Prevalence and risk factors of preconception anemia: a community-based cross-sectional study of rural women of reproductive age in Northeastern Tanzania. PLoS ONE 13(12): e0208413. doi:10.1371/journal.pone.0208413
8. Fuady A, Houweling TAJ, Mansyur M, Richardus JH. Catastrophic total costs in tuberculosis-affected households and their determinants since Indonesia's implementation of universal health coverage. Infect Dis Poverty. 2018; 7(1).
9. Tompa E, Mofidi A, van den Heuvel S, van Bree T, Michaelsen F, Jung Y, et al. Economic burden of work injuries and diseases: a framework and application in five European Union countries. BMC Public Health. 2021; 21(49). doi:10.1186/s12889-020-10050-7
10. Mansyur M, Khoe LC, Karman MM, Ilyas M. Improving workplace-based intervention in Indonesia to prevent and control anemia. J Prim Care Community Heal. 2019; 10.
11. World Health Organization. Workers' health: global plan of action. In: Sixtieth World Health Assembly Agenda. 23 May 2007 [Internet]. [cited 2021 Aug 24]. Geneva: World Health Organisation; 2007. p. 12. Available from: https://www.who.int/occupational_health/WHO_health_assembly_en_web.pdf